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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,452	06/10/2002	Kevin J. Mills	020631-000111US	1849
20350	7590	12/06/2004	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			RAY, GOPAL C	
			ART UNIT	PAPER NUMBER
			2111	

DATE MAILED: 12/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/009,452

Applicant(s)

MILLS ET AL.



Examiner

Gopal C. Ray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2002.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 48-55 and 59-62 is/are allowed.
6) ☒ Claim(s) 1-47 and 56-58 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 10 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/02, 1/03 and 7/04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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1. Claims 1- 62 are presented for examination.
2. The drawings filed on 6/10/02 are acceptable by the examiner. However, direct any inquiries concerning drawing review by the USPTO draftsman to the Drawing Review Branch at (703) 305-8404.
3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. Furthermore, all claims should be revised carefully to eliminate all grammatical errors and antecedent basis problems.
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
5. Claim 1, 28-30, 39, 40, and 56-58 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,184,282 issued to Kaneda et al.

As to claim 1, 28, 30 and 40, the reference of Kaneda et al. teaches a removable expansion card in Figure 9 for a portable host comprising an expansion card frame and PCB, a host-interconnect for coupling with the host, an I/O interconnect for coupling with the external I/O device (Figure 9, element 27), I/O adapter circuitry for the I/O device (inherent in the serial to parallel conversion required to interface a telephone device with a computer), a slot for a removable memory (Figure 9, elements 16 and 17 and column 5, lines 35-40), and removable memory adapter circuitry for the removable memory

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(inherent in the fact that the removable memory and host computer communicate) (see abstract, col. 1, lines 12-25, and col. 2, line 45 – col. 3, line 4).

As to claim 29, the reference of Kaneda et al. teaches that the removable memory is a private memory for application-specific circuitry and that the management of the removable memory is an ancillary function to the primary function of the specific application (see col. 1, lines 12-34).

As to claims 39, 56, 57, and 58, the reference of Kaneda et al. teaches a slot assembly for a removable expansion memory comprising a PCB, an I/O connector mounted on the PCB providing a first partial bottom of slot, a guide/connector assembly mounted on PCB having connector fingers and providing a second partial bottom of the slot, rear sides of the slot and slot back stop, upper outside frame of expansion module frame providing front sides of slot and the lid of the expansion module providing the top of the slot (see Figures 6 and 9).

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 3, 5, 7, 9-17, 41, 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 5,184,282 issued to Kaneda et al. in view of common knowledge in the art.

As to claim 2, the reference of Kaneda fails to disclose that the card is a CompactFlash card. The examiner takes Official Notice that CompactFlash cards are well known in the art of removable expansion cards. It would have been obvious to one of ordinary skill in art at the time of the invention to employ the use of a CompactFlash card in the system of Kaneda so as to allow the system to be compatible with a widely used standard and to allow the system to take advantage of the many benefits provided by a CompactFlash card .

As to claim 3, the reference of Kaneda fails to disclose that the removable memory slot is compatible with a MMC, and the removable memory adapter circuitry is a MMC adapter circuitry. The examiner takes Official Notice that MMC is well known in the art of removable expansion cards. It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of MMC components and circuitry in the system of Kaneda so as to allow the system to be compatible with a widely used standard and to allow the system to take advantage of the many benefits provided by MMC.

As to claim 5, the reference of Kaneda fails to disclose that the I/O adapter circuitry is a LAN adapter and the I/O interconnect includes a cable having a standard LAN connector. The examiner takes Official Notice that LAN cards, LAN cables and LAN connectors are well known in the art of networks. It would have been obvious to one of ordinary skill in art at the time of the invention to employ the use of a LAN card, LAN-cable and LAN connector in the system of Kaneda so as to allow the system of Kaneda to function in a network environment.

As to claim 7, the reference of Kaneda fails to disclose that the I/O interconnect is a Honda-style 15-pin connector integral the card. The examiner takes Official Notice that Honda-style 15-pin connectors are well known in the art of expansion cards. It would have been obvious to one of ordinary skill in art at the time of the invention to employ the use of Honda-style 15-pin connectors in the system of Kaneda so as to be compatible with a widely used connector and take advantage of the benefits provided by Honda-style 15-pin connectors.

As to claims 9-17, the reference of Kaneda discloses some of the claim limitations, as discussed above with respect to claims 1-8, but fails to disclose the environmental limitations of video and audio digitally encoded data. The examiner takes Official Notice that the processing of video and audio data in the manner recited in the claim limitations is well known in art of multimedia processing. It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of any kind of digitally encoded data, including digitally encoded video and audio data, as the data stored in the removable memory since the type of data stored and processed would not change the overall configuration of an expansion card with a slot for a removable memory and a connector for an I/O device.

As to claim 41, the claimed elements have already been discussed above with respect to claim 1 above, with the exception of a second-level I/O interface for coupling with a second external I/O device, and second-level I/O adapter circuitry for the second I/O device.

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Having a second-level I/O interface for coupling with a second external I/O device and second-level I/O adapter circuitry for the second I/O device is simply a duplication of the first I/O interface, external I/O device and I/O adapter. And according to *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960), mere duplication of parts has no patentable significance unless a new and unexpected result is produced, so that it would have been obvious to one of ordinary skill in the art at the time of the invention to have a second-level I/O interface for coupling with a second external I/O device, and second-level I/O adapter circuitry for the second I/O device.

As to claim 42, the reference of Kaneda et al. teaches that the first external I/O device is a phone in column 4, lines 60-62.

8. Claims 4 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 5,184,282 issued to Kaneda et al. in view of US Patent 5,615,344 issued to Corder.

As to claim 4, the reference of Kaneda et al. fails to disclose that the I/O adapter circuitry is a serial I/O adapter and the I/O interconnect includes a cable having a standard serial connector. However, the reference of Corder discloses a card with a serial I/O adapter and the I/O interconnect that includes a cable having a standard serial connector in Figures 1 and 3. It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a serial I/O adapter and serial connector so as to interface with the wide variety of serial I/O devices available in the art.

As to claim 6, the reference of Kaneda et al. fails to disclose that the I/O adapter circuitry is a parallel adapter and the I/O interconnect includes a cable having a standard parallel connector. However, the reference of Corder discloses a card with a parallel I/O adapter and an I/O interconnect that includes a cable having a parallel connector in Fig.

1. It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a serial I/O adapter and serial connector so as to interface with the wide variety of parallel I/O devices available in the art.

9. Claims 8 and 43-47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 5,184,282 issued to Kaneda et al. in view of US Patent 5,611,055 issued to Krishan.

As to claim 8, the reference of Kaneda et al. fails to disclose that the card is designed to abut and fasten with at least part of the I/O device such that the I/O interconnect for coupling with the I/O device is cableless. However, the reference of Krishan discloses that a card is designed to abut and fasten with at least part of the I/O device such that the I/O interconnect for coupling with the I/O device is cableless. It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a card that is designed to abut and fasten with at least part of the I/O device such that the I/O interconnect for coupling with the I/O device is cableless in the system Kaneda, as the reference of Krishan teaches, so as to avoid problems associated with cables, such as tangling with other cables and cluttering and not having cables of sufficient length.

As to claim 43, the reference of Kaneda fails to disclose that the second-level I/O adapter circuit includes wireless interface circuitry, the second-level I/O interface includes a wireless transducer, and the second-level I/O device includes wireless network interface circuitry, and the coupling to the second external I/O device is wireless. but does disclose that connector 27 allows communication devices such as networks to be coupled to card. The reference of Krishan discloses that the I/O interconnect for coupling with the I/O device is cableless. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to couple a wireless Network, with its associated transducer, to the card-to-allow a network to be coupled to the system without dealing with problems associated with cables, such as tangling with other cables and cluttering and not having cables of sufficient length.

As to claim 44, the reference of Kaneda fails to disclose that the first wireless network interface circuitry is RF wireless network interface circuitry and the wireless transducer includes an antenna. The examiner takes Official Notice that RF wireless network interface circuitry and antennas are well known in the art of wireless communications. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of RF wireless network interface circuitry and antennas in the system of Kaneda, since RF wireless network interface circuitry and antennas are reliable and cost-effective means for carrying out communication over a wireless network.

As to claim 45, the reference of Kaneda fails to disclose that the RF wireless network interface circuitry is compatible with the Bluetooth wireless network standard. The Bluetooth wireless network standard is a well known standard in the art of wireless communications. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the RF wireless network interface circuitry be

compatible with the Bluetooth wireless network standard so as to allow the RP wireless network interface circuitry to be in conformance with Bluetooth, which is among the latest developments in wireless communications, thereby allowing the system of Kaneda to be implemented in the many systems which use the Bluetooth standard.

As to claims 46-47, the added limitations of the claims are rejected for similar reasons as discussed in the rejection of claims 42-45.

10. Claims 18-27 and 31-38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 5,184,282 issued to Kaneda et al. in view of US Patent 5,928,347 issued to Jones.

As to claims 18-22, Kaneda discloses some of the claim limitations as discussed above with respect to claims 1-8. but fails to disclose the limitations regarding the transferring of digitally encoded media from an external system to a PDA to the expansion card to the removable memory and later reading, decoding. And playing back the digitally encoded media. However, the reference of Jones discloses transferring digitally encoded media from an external system to a PDA to the expansion card to the removable memory and later reading, decoding, and playing back the digitally encoded media (see abstract and column 1, lines 40-50, column 2. line 39 - column 3, line 2, and column 3. line 30 - column 4, line 8). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the removable memory card to store digitally encoded media for later playback in the system of Kaneda. as Jones teaches, so as to allow the memory card to be used with consumer devices, as Jones teaches in column 3, lines 40-50 and column 4, lines 40-50.

As to claims 23-27, Kaneda discloses substantially all the limitations. As discussed above with respect to claims 1-8. with the exception of the data in the removable memory being address book records, telephone communications, and map

information. However, the reference of Jones teaches that the removable memory can store various kinds of data such as address book data and voice and pager messages (see column 2, lines 39-47). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to allow any kind of data including address book data and voice and pager messages, in the memory of Kaneda, as Jones teaches, so as to allow the memory card to be used with a wide variety of applications and consumer products, as Jones teaches in column 2, lines 39-47.

As to claims 31-34 and 36, the claimed limitations have already been discussed above with respect to claims 18-22.

As to Claims 35 and 37, the reference of Kaneda fails to disclose that the PDA and card transition from a first power mode to a second power mode in response to a message received over the network. Examiner takes Official Notice that transitioning from a first power mode to a second power mode in response to a message or command is well known in the art of power management. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to transition from one power mode to another power mode in response to a message or command in the system of Kaneda so as to manage power consumption in the system.

As to claim 38, the claimed limitations have already been discussed with respect to claim 8 above.

11. Claims 48-55 and 59-62 are allowable because the prior art of record, alone or in combination, does not teach or fairly suggest transferring information between the first and second networks via the first-level and second-level removable expansion modules, where the first-level module is coupled to a portable host via a first-level slot and the second-level module is coupled to the first-level module via a second-level slot, or transferring information between a first-level module and a second-level module, where

the first-level module is coupled to a portable host via a first-level slot and the second-level module is coupled to the first-level module via a second-level slot in combination with other claimed elements. If applicants are aware of any better prior art than those are cited, they are required to bring them to the attention of the examiner.

Any comments considered necessary by applicant must be submitted in response to this office action. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is urged to consider the references. However, the references should be evaluated by what they suggest to one versed in the art, rather than by their specific disclosure. The prior art submitted by applicant has been considered by the examiner and made of record in the file.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gopal C. Ray whose telephone number is (571) 272-3631. The examiner can normally be reached on Monday - Friday from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart, can be reached on (571) 272-3632. The new fax phone number for this Group is (571) 272-3632.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [mark.rinehart@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record

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includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC central telephone number is (571) 272-2100.

Lastly, paper copies of cited U.S. Patents and Patent Application Publications ceased to be mailed to applicants with office actions as of June 2004. Paper copies of Foreign Patents and Non-Patent Literature will continue to be included with office actions. These cited U.S. Patents and Patent Application Publications are available for download via Office's PAIR. As an alternate source, all U.S. Patents and Patent Application Publications are available on the USPTO web site (www.uspto.gov), from the office of Public Records and from commercial sources. Applicants are referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 for information on this policy. Requests to restart a period for response due to a missing U.S. Patent or Patent Application Publications will not be granted.

Gopal C. Ray
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PRIMARY EXAMINER
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